

IN THE CLAIMS:

Please cancel claims 1-21 without prejudice or disclaimer, and substitute new claims 22-42 therefor as follows:

Claims 1-21 (Cancelled).

22. (New) A method of planning cellular communication networks, comprising the step of defining at least one cost function to be optimised, said at least one cost function being indicative of the quality of service of at least one class of services rendered by the network, comprising the step of selecting said at least one class of services as location-based services rendered by said network.

23. (New) The method of claim 22, wherein said cost function indicative of the quality of service of location-based services is based on measuring a dilution of precision of said network.

24. (New) The method of claim 22, comprising the steps of:
defining a joint cost function jointly indicative of the quality of service of location-based services and at least an additional class of services rendered by said network, said additional class of services being selected from the group of voice services and data services; and
optimising said joint cost function.

25. (New) The method of claim 22, comprising the steps of:
providing a system for measuring at least one actual network parameter;
and

comparing the measurements provided by said measurement system with the corresponding parameters as planned.

26. (New) The method of claim 22, comprising the step of locating at least one critical point in the network where inadequate quality of service is being provided.

27. (New) The method of claim 26, comprising the step of generating information items indicative of counter measures to be carried out in said network in order to dispense with at least one critical point.

28. (New) The method of claim 22, wherein said at least one cost function is optimised by using as input data the location of at least one radiating system associated with one base station in said cellular communication network.

29. (New) The method of claim 28, for planning a cellular communication network over a given area, comprising the steps of:

subdividing said area into sub-areas, one of said sub-areas corresponding to the destination sub-area of a new base station in said network, the remaining sub-areas being expected to be affected by the introduction of said new base station;

planning said destination sub-area of the new base station also by evaluating the effects on said remaining sub-areas; and

evaluating the quality of service resulting from said planning while ascertaining whether such a level of quality of service is satisfactory.

30. (New) The method of claim 29, wherein said planning involves computing a point-by-point value of the dilution of precision for all the pixels in the area subject to planning.

31. (New) The method of claim 30, wherein said planning involves computing a cost function pertaining to location services only, said cost function being a linear combination of said dilution of precision and the average and minimum values thereof.

32. (New) The method of claim 29, comprising the step of optimising a joint cost function for voice, data and location services.

33. (New) The method of claim 29, wherein, if said quality of service is found not to be satisfactory, comprising the step of re-planning the position of at least one radiating system associated with one base station in said cellular network.

34. (New) The method of claim 33, wherein said at least one radiating system whose position is re-planned associated with one base station is a radiating system associated with said new base station.

35. (New) The method of claim 25, comprising the steps of:
providing a set of network design parameters;
obtaining from said measurement system a set of measurements corresponding to said set of design parameters; and
locating at least one critical area wherein the quality of service of said location services fails to reach an expected quality of service level as a result of said set of measurements failing to comply with said set of network design parameters.

36. (New) The method of claim 35, comprising the steps of:
selecting a service scenario; and
selecting at least one location system as the one most affected by the variations in the network parameters being analysed.

37. (New) The method of claim 35, comprising the step of providing a list of points in the network characterised by their quality of service.

38. (New) The method of claim 35, comprising the steps of generating and displaying a map of critical points in the area under analysis.

39. (New) The method of claim 22, comprising the step of providing a remote deployment module arranged for operating on a sub-set of the network subject to planning.

40. (New) The method of claim 39, comprising the steps of configuring said remote deployment module for collecting local network data, pre-validating such measurements and either comparing said measurements with corresponding planning data of a network design sub-set or sending such measurements to a remote module for further processing.

41. (New) A cellular communication network comprising at least one processing module for implementing the planning method of any one of claims 22 to 40.

42. (New) A computer program product capable of being directly loaded in the memory of a computer and including software code portions for performing the steps of the method of any one of claims 22 to 40 when the product is capable of being run on a computer.